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ABSTRACT

This paper describes the effects of applying research generalizations about inservice teacher education to the practices of a local school district. Generalizations considered include: (1) short- and long-range planning needs; (2) joint planning and participation by administrators and teachers; (3) relationships among inservice and curriculum development, instructional improvement, and teachers' individual needs; (4) demonstration and practice of new skills; (5) continuous, locally based inservice; (6) peer observation and interaction; and (7) voluntary participation. A long-range program which would incorporate these generalizations was launched. Program elements include: (1) program goals and objectives jointly derived by administrators and teachers; (2) university involvement for 2 years with the opportunity for participating teachers to earn up to 12 credits; (3) joint participation for administrators and teachers; (4) activities structured to the school district's time table; (5) cadre teams from each building for acquiring and offering inservice training; (6) support of university personnel; (7) research and evaluation conducted by university personnel; and (8) opportunities to develop additional inservice activities and programs. A description is given of the school district, district personnel, and various instruments and processes used to gather data. Conclusions and findings are discussed in detail for each of the research generalizations, and 14 tables presenting additional data are included. (CJB)

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THE APPLICATION OF RESEARCH GENERALIZATIONS FROM STAFF DEVELOPMENT TO A RURAL SCHOOL DISTRICT: A CASE STUDY-RESEARCH REPORT

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Introduction

Inservice education has, at times, been called the "stepchild" of education and often viewed as a "necessary evil" that must be complied with by school personnel. The latter seems especially true if time or days are mandated for inservice activities by local Boards or state departments of education. Few fiscal resources are generally allocated for inservice activities. One federal report indicated that on an average less than one-half of one percent of a school budget is spent on inservice training (Kilgore, 1980). Additionally, there has been some confusion generated concerning using the term inservice education interchangeably with the term staff development. For the purpose of this paper, inservice education will be defined as all activities engaged in by professional personnel during their service and designed to contribute to improvement on the job. Additionally, staff development will be seen as that part of inservice which is voluntary for the professional personnel in a district.

Considering the general status and finances given inservice and staff development programs it is not surprising to find that research concerning these programs has been scattered and questionable. Data from several of the studies reviewed were based on self-reports of participants rather than learner attitudes or outcomes. There have been some major research reviews published recently, however, that have synthesized the available research on staff development programs and have provided users with several generalizations that would appear to make sense if applied to local school

districts. The generalizations derived from the research on staff development and utilized in this paper include the following:

1. Programs should be planned to take into account both short- and long-range planning needs.

2. Teachers and administrators should jointly plan and participate in all staff development programs.

3. There should be a close relationship between inservice activities and the development of curriculum, the improvement of instruction and the individual on-the-job needs of the teachers.

4. Staff development programs should be aimed at specific skills, emphasize demonstrations and opportunities for staff to practice the new skills and receive feedback, and be transferrable to the classroom.

5. Programs should be continuous, that is, extend throughout a school year or more (rather than the one-day "dog and pony shows," unless the one day activity is related to the long-range plans of the district), and be held in the local school as much as possible.

6. Districts should identify local personnel, especially teachers, to conduct and demonstrate new skills during inservice activities, and opportunities should be provided to observe other teachers who have mastered and are practicing the skills being taught. Teachers and administrators should develop a "coaching" type of relationship when developing new skills.

7. Participation in staff development activities should be voluntary and also provide opportunities for informal peer interaction (Phi Delta Kappa, 1983; Mertens, 1982; A.S.C.D., 1980; Kilgore, 1980).

The purpose of this paper is to describe the effects of applying the above research generalizations to a local school district. To better understand the implications of the data gathered throughout the duration of this project a discription of the district and district personnel is included, along with the instruments and processes used to gather data.

The Contextual Setting of the Study

The staff development project was a joint undertaking between a local school district in rural Nebraska and selected personnel from the Teachers College of the State University. The school district was located in a town three hundered and fifty miles from the University. The town has a population of approximately six thousand people, yet is located in a sparsely populated area of the state. The primary industry of the town is agriculture and agriculture-related business. The town also serves as the county seat and houses a four county local education agency (Educational Service Unit). The school district has five schools; two K-4 elementary buildings administered by the same principal, a 5-6 building with one administrator, a junior high school with one administrator and senior high school, also with one administrator. The district employs approximately ninety professional personnel including administrators.

A profile of the teachers in the district indicates that the average teacher is a female (60 percent), about 40 years of age and with a little over fifteen years of experience, ten of which were in their current positions. Less than half of the teachers have their master's degree, due primarily to the inaccessability of programs (the nearest institutions of higher education are one hundred and seventy miles away and generally do not offer off-campus degree programs). The district experienced very little turnover in teaching staff during the past four years, averaging only one or two teachers per year (Table 1).

INSERT TABLE 1 ABOUT HERE

The morale of district personnel appears to be above average with strong feelings of rapport between teachers and their administrators, satisfaction with their teaching, reported good rapport with other teachers, and appeared satisfied with the curriculum, school facilities, services and community pressures. Areas of moderate concern included teacher salary, load, community support and the status of teachers, although none of these areas were seen negatively nor were they significantly different from any other areas. Additionally, there appeared to be agreement between teachers and administrators concerning these measured variables (Table 2).

INSERT TABLE 2 ABOUT HERE

It would appear that professional personnel located in the school district were a middle-aged, experienced group of teachers who lived in a relatively small yet stable town, somewhat isolated from larger population areas and access to institutions of higher education. Morale and attitude of teachers about their schools, community, administrators and roles in the schools is good. There were no indications from the teachers of the need to change or alter existing staff development practices, although there were some indications that both faculty and administration wished to develop a more effective teacher evaluation system.

Project Development

The local educational service unit, during the spring of 1981, conducted a course for area administrators regarding teacher evaluation. University personnel were contracted to provide information and services to the service unit and the administrators. As the primary focus of the administrators appeared to be teacher evaluation for the improvement of instruction, data concerning research on teaching and inservice programs were presented. The superintendent and principals from the target district decided that, prior to developing an evaluation system for teachers, teacher needs and current teaching practices had to be identified. Additionally, as the current staff development program in the district did not meet the recommended generalizations derived from the research on inservice, it was decided to put in place a long-range and continuous staff development process. The primary impetus, therefore, for developing an inservice program that would utilize the principles generated from staff development research came from the district administrative team.

The administration, in cooperation with district teachers, negotiated with university personnel to put into place a plan that would ultimately provide the district with a self-sustaining and viable inservice process. The plan, utilizing the research generalizations previously listed, included the following elements.

1. Program goals and objectives were to be jointly derived by administrators and teachers.
2. The initial program (with university involvement) would be two years in length with a possibility of a participant earning up to twelve

university credits if desired. The program would be voluntary for teaching personnel.

3. Administrators and teachers would participate together at the onset. The first semester activities would include a course to train teachers and administrators as "cadre," that is, to be able to train other teachers. Ten teachers along with the five district administrators (including the superintendent) would serve as the training group. Each building was to be represented and a building team developed. University personnel would provide all instruction during the first semester. Course content, as desired by district personnel, was based primarily on Models of Teaching as developed by Joyce and Weil (1980).

4. Inservice activities were not structured to a university calendar nor to weekly meeting requirements. Rather, the structure was developed to meet the school district time table and university personnel availability, e.g., participants and instructors met for five, two-day sessions between October and January of the fall semester, one day of each session being a Saturday.

5. Each cadre team (a building principal and some teachers), upon successful completion of the first semester's training program, would offer inservice activities at the building level for each of the next three semesters. Each building team would work out a schedule for their teachers and building level needs.

6. University personnel would meet regularly with the cadre and, when necessary, with building faculty members, in a supportive role. The research generalization utilized in this practice was to allow the opportunity for teachers to be the primary teachers of other teachers, while administrators and university personnel were to provide organizational and substantive support to the teaching cadre.

7. The participating district would allow university personnel to collect data and develop a research-evaluation design for the program. Data collection would include teacher morale and behaviors, student attitudes, and administrator behaviors and attitudes.

8. Additional inservice programs and activities could be developed at any time as outgrowths of the original program and/or changes and new direction in terms of teacher and district needs.

The Research-Evaluation Design

Several methodologies were employed for collecting data throughout the projects existence. Presage data were collected from participants and

non-participants prior to start-up, and included descriptions of current teaching practices, teacher and administrator morale, and student perceptions of their teachers. The design also included a pre-post teacher and student data collection scheme incorporated into a quasi-experimental design that would change dependent upon participants during any given period of time. The cadre served as the first experimental group, and data were collected from them and their students. A randomly selected group of non-participating teachers were used as a control group. The presage data using teacher opininaires, student evaluations of teachers, and self-reporting devices on teaching behaviors indicated that the control and experimental groups were not different in any significant way. As each group of participants proceeded through the training program, another randomly selected group of teachers was used as a control group. Naturalistic methodologies were also employed as part of the data collection process. Administrators kept staff development "logs" of related activities and observations in their buildings. University personnel wrote descriptive reports of training sessions and classroom and video tape observations. Instruments were designed to determine if teachers were utilizing newly aquired behaviors in their classrooms. Cadre teachers also kept logs reporting on their in-building efforts and activities as the program expanded into each building.

Several instruments were chosen to collect additional data throughout the life of the project. The Purdue Teacher Opinionaire (PTO) was designed to measure teacher morale (Bently and Rempel, 1970). It yields a general

score and subscores which separate morale into the following variables: 1) teacher rapport with the principal; 2) satisfaction with teaching; 3) rapport with other teachers; 4) teacher salary; 5) teacher load; 6) curriculum issues; 7) teacher status; 8) community support of education; 9) school facilities and services; and 10) community pressures. Reliability data indicate an overall test-re-test reliability of .87 with correlations for the ten factors ranging from .62 to .88 with most being in the .80's. Some evidence of construct validity was reported in the manual.

The Purdue Teacher Evaluation scale (PTES) was designed to provide the junior or senior high school teacher with an evaluation of his or her performance as seen through the eyes of the students. The instrument measures teacher performance in six sub-scales; 1) ability to motivate students; 2) ability to control students; 3) subject matter orientation of the teacher; 4) student teacher communication; 5) teaching methods and procedures; and 6) teacher fairness. Reliability coefficients ranged from .83 to .91 using a split half technique. Validity correlations among the six scales computed on a sample of 198 teachers range from .47 to .89 (Bentley and Starry, 1970). This instrument was used in this project to measure teacher performance from grades 5 through 12.

The instrument chosen to assess student perceptions for K-4 teachers was developed by the University of Georgia and utilized in their competency based teacher certification program. No reliability or validity studies were reported as the instrument was considered somewhat unstable when used with younger children. For purposes of this study, the tool was

implemented by having the building administrator read the questions to the children and each child responded by coloring a frowning, neutral or smiling face which represented how the statement corresponded to their teacher. The thirty items were also divided into six sub-categories: 1) motivation; 2) teaching methods; 3) procedural/organizational skills; 4) teacher control; 5) teacher communication with students; and 6) teacher fairness.

Upon completion of the project, a self-report survey instrument was developed for use with the entire faculty. The instrument was developed for use with the entire faculty. The instrument was developed to measure, in large part, the overall perceived effects of the program in terms of the generalizations derived from the research on staff development. Sixty questions were developed and subjected to a pilot study. A factor analysis yielded five major categories: 1) the administrator as a "coach" in staff development programs; 2) the administrators providing a supportive environment for staff development; 3) teachers teaching other teachers in a staff development program; 4) teacher perceptions of the staff development program; and 5) teacher self-reported skill gains developed from the staff development program. Adjusted reliability coefficients were in the .90 range. A high degree of content validity was found both with the research generalizations used during the project and the content of inservice program.

Results

Field based research projects often encounter variables that were unanticipated. This project was no different. Unanticipated events occurred that had direct influence on the project and will be presented with the interpretation of the results for clarification purposes.

Chronologically, the program followed the first year plan as originally outlined. The cadre teachers and administrators were trained by university personnel in the use of several models of teaching. Each participant demonstrated the application of the models in their classrooms, video-taped and analyzed their performance, and repeated the processes. Additionally, the participants were provided with a suggested format and procedures that could be utilized when implementing their in-building programs. Knowledge tests concerning the course content were created, taken and passed by the participants. Cadre were to implement the in-building programs starting with the second semester (January, 1982). To acquaint the total faculty with the processes, a full-day inservice program was planned and one of the author's of Models of Teaching was the principal speaker.

Each building team created a staff development program using the information from Models of Teaching and the generalizations from the research on staff development as primary organizers. Participation by teachers was voluntary. Twenty three teachers chose to participate during the first offering, two were secondary (high school), the balance were in

the three elementary schools. It ws rather disappointing to have so few secondary teachers involved in the program.

Each building team (including the principal) was to work with their teachers throughout the semester in a variety of ways. For example, they were to demonstrate the new models, peer teach, visit classrooms, etc., to help in providing both the substance and climate for improving instruction. The secondary schools had more "cadre" than participants, therefore the trained teachers (cadre) were able to work on an individualized basis with the two new participants. The high school principal did provide some released time for cadre to work with the participants, however, the organization was rather loose. The junior high principal did not stay actively involved in the program as there were no junior high teachers who opted to participate. One elementary principal had two buildings to supervise, and as the semester progresses, he became less involved in the program and left all the instruction to the teaching cadre. There was some feeling from the cadre of these two schools that the program was no longer supported and they gradually withdrew their personal support. They did, however, complete the prescribed semester activities but did not participate during the second year.

The other elementary principal worked with the teaching cadre in his building, supported the program by attending all staff development sessions, demonstrated teaching models in the classrooms while teachers observed, provided some released time for cadre and teachers to work together, substituted for his teachers, and generally created a supportive atmosphere toward the improvement of instruction and continued teacher

growth. The teaching cadre in his building were both enthusiastic and supportive of the program. Posters and bulletin board displays were created during the staff development program. Announcements and displays in the teachers lounge suggested creative ways to utilize teaching models in the classroom.

Teacher behavior data were collected from three sources: 1) observations of teachers in their classrooms; 2) video tapes of teachers using models of teaching; and 3) from student evaluations of teacher behaviors. Teachers did change their behavior! Every teacher that participated in the program was able, after instruction by either the university training team or the teaching cadre, to utilize and operate, upon demand, at least two new models of teaching in their classrooms. It is important to note that these behaviors could be used on demand, not all teachers used the new models of teaching as part of their regular teaching. The exceptions were two. Teachers in the one elementary school in which the principal provided a supportive environment did use the newly learned material on a regular basis. Teaching cadre at the secondary level also continued to utilize the models they had learned on a somewhat regular basis. There was no evidence to suggest that other teachers, either cadre or those trained by cadre used the models on any level. Two logs from administrators did indicate that they observed non-participating teachers attempting to utilize some of the models and when asked as to the motivation the teachers reported that they had heard other teachers talking

about them and had seen them demonstrated during the total faculty inservice day.

Student evaluation of K-4 teachers yielded scores for the teacher behavior variables of: 1) motivation; 2) teaching methods; 3) procedural/organizational skills; 4) control; 5) communication; and 6) fairness. Data shown on Table 3 indicate that for the teaching cadre group, when compared with a control group after instruction, there were significant differences in three categories of teaching behavior; motivation, teaching methods and procedural/organizational skills.

INSERT TABLE 3 ABOUT HERE

Table 4 presents data which provides a pre-post comparison the first group of teachers trained by the teaching cadre. Data were collected from the teachers prior to instruction and again after instruction. One area showed a statistically significant change from pre-to-post application, that of procedural/organizational skill. Mean scores in all other categories were higher in the post-test application, but not at a statistically significant level.

INSERT TABLE 4 ABOUT HERE

A second comparison was made with the first group of K-4 teachers trained by the teaching cadre. Post-test reports were compared with a control group of K-4 teachers. Results indicate only one area of

statistically significant difference between the groups (motivation), and the difference was in the direction of the control group (Table 5). It would appear that the staff development training program, as measured by this instrument, did not indicate any substantial differences between trained and untrained teachers as perceived by their students.

INSERT TABLE 5 ABOUT HERE

The Purdue Teacher Evaluation Scale was utilized for analyzing student evaluations of teachers from grades 5-12. Table 6 displays the scores which compares the teaching cadre (trained by university personnel) and a control group of teachers. Statistical significance appears in three categories; motivation; communications; and teaching methods. Two of these categories (motivation and teaching methods) are identical with the data derived from the student evaluation of the K-4 teachers. Given the nature of the inservice activities, the researchers hypothesized that both of these categories could have been affected by the training program.

INSERT TABLE 6 ABOUT HERE

The last comparison of student reported data is between the first group of teachers (5-12) who were trained by the teaching cadre and a control group (Table 7). No significant differences were found between groups in any category. It should be noted that in an overall sense scores of all teachers were relatively high. A score of 4.0 was considered the

highest. All but one category of scores for all teachers was higher than a score of 3, which indicated that students reported generally high scores for their teachers.

INSERT TABLE 7 ABOUT HERE

In conclusion, it seemed that all teachers in the school district received relatively high scores when evaluated by their students. The intervention of the inservice training program did not change this perception nor show a major difference between teachers who participated and those that did not with the exception of the teaching cadre. The teaching cadre (trained by out-of-district consultants) may have fallen under the "Hawthorn" effect, that is, each teacher knew that they were in a special program and would have to teach other teachers. The halo effect may have caused the differences in student perceptions.

The final set of data to be reported are the results of a questionnaire distributed to all teachers in the district upon completion of the two year program. Individual items and scores appear on Table 14. Four 2 X 2 cells were developed and on analyses of variance compared elementary and secondary school teachers by participation or non-participation in the staff development program over the two year span. The first analysis centers around the practice of the school administrator acting in the role of "coach." This cluster included such items as: 1) the administrator helping the teacher plan teaching models and strategies; 2) the administrator observing teachers using teaching models and

"coaching" them as to alternative uses and refinement; 3) demonstrating the use of a teaching model and strategy for the teacher to observe; and 4) discussing the items learned during inservice sessions with teachers on both a formal and informal basis throughout the year. A cautionary note is necessary when reading Tables 8 through 11. Although an ANOVA was used as the primary statistical procedure, results are tentative due to the cell that provides the scores for secondary program participants. Note that an N of 4 appears in the secondary teacher participant cell, thereby placing all interaction results in a questionable state. It would appear that overall results should be limited to a discussion of main effects due to the small number of main effects due to the small number of respondents in that cell.

Teachers responded to the questionnaire using a seven point Likert scale. Responses ranged from 1 to 7 with the following value explanations: 1 (not at all), 2 (very little), 3 (to some extent), 4 (to a moderate extent), 5 (often), 6 (almost always), and 7 (all the time).

Data shown on Table 8 indicate a significant overall main effect. Teachers who partcipated in the program apparently see their administrators in a coaching role as part of their overall behavior pattern, and this appeared to be true for both elementary and secondary teachers. A statistical significance was also noted in the two-way interaction that might be accounted for by the small number of secondary participants. This interaction indicates that secondary participants reported a significantly higher involvement of the secondary principals as "coaches"

than did the elementary participants. One possible explanation is that because there were so few secondary teachers involved the principal was able to provide the participants with the attention they reported. Additionally, the principal as a participant in the inservice program could communicate with the teacher participants on a totally different level. Each could use a common vocabulary and share in the practices that were learned together during the training period.

INSERT TABLE 8 ABOUT HERE

The second area concerns the teachers perceptions of the role of the administrator as one who provides a supportive environment in which staff development activities would be nurtured and grow. A supportive environment encompasses such areas as: 1) heightened communications between the principal and teachers; 2) jointly developing long range staff development goals; 3) the principals support of and knowledge concerning staff activities and programs; 4) the principal providing for individual needs of teachers as new ideas and practices are learned; and 5) providing supportive feedback to teachers when requested. Table 9 data indicate a significant main effect difference between participant and non-participant groups concerning the role of the principal in a support role. The total scores, however, were in the moderate range. In other words, administrative support for inservice programs was not high, but teachers who did participate apparently felt more support than non-participants. This appears to be a rather disappointing finding as the researchers thought

that more support for inservice programs and professional growth might be perceived by all faculty regardless of participation.

INSERT TABLE 9 ABOUT HERE

The third category for viewing the research generalizations from staff development programs was that of the teacher acting in the role as a teacher of other teachers. This concept included the notion of a teacher as a helper of other teacher in the "coaching" role. Behaviors involved in these activities included: 1) working cooperatively with other teachers on planning and improving classroom instruction; 2) discussing teaching with other teachers; 3) encouraging other teachers to become involved in growth related activities; and 4) visiting and observing one another in actual teaching situations with opportunities to discuss what was observed. Data shown on Table 10 indicate a statistically significant interaction effect but an unacceptable (statistically) main effect ($p < .06$) for this category. The interaction shows a greater difference in the mean scores between secondary participants and non-participants than with the elementary teachers. Overall scores indicate that these behaviors occur only to some extent in the district, so that the concept is generally not practiced. To account for the differences that did appear when these data were analyzed, however, may create some insights into suggested patterns for school inservice improvement. First, one difference is in the organization of the elementary and secondary school. The elementary school generally uses a self contained classroom structure and are organized by

grade levels. Teachers spend most of their time with their students and little planning time is provided. Secondary schools, on the other hand, are generally divided by class periods and teachers have one or more periods per day that may be used for planning or coaching other teachers. In this study, secondary teaching cadre were given released time, on occasion, to work with other teachers on improving instructional techniques. As a general rule, released time was not provided for cadre at the elementary school. Released time occurred in only one elementary building, the 5th-6th grade center, and not on a regular basis. It seems apparent that this category needs further study and testing to determine overall effects.

INSERT TABLE 10 ABOUT HERE

The last 2 X 2 ANOVA indicates scores of teachers self reported skill gains as a result of the inservice program. Table 11 data indicate that there is a significant difference between participating teachers when compared with non-participants, and that the secondary teacher participants were significantly higher than the elementary participants. Apparently the participating teachers felt they developed several new skills that were directly applicable to their classrooms, and that the use of these newly developed skills occurred fairly often.

INSERT TABLE 11 ABOUT HERE

One of the questions being addressed throughout this study pertains to the role of the principal in effective staff development programs. As there was a major difference between the roles of the elementary principals that occurred during the first year of the project, an analysis of variance between elementary schools and the five previously discussed variables was made (Table 12). Central school (5th and 6th grades) was the school in which the principal appeared to provide the more supportive environment for the inservice program. The principal for the other two schools gradually became inactive during the first year. During the second year he became active and supportive of the program. The overall effects, as indicated by the data, show no significant difference between schools except in the area of the perceived components of the staff development program. Apparently the Central school faculty see the elements of staff development programs such as: 1) in building training; 2) participation by principals and others; and 3) demonstrations and use of usable skills as important elements necessary to effective programs. Mean scores for each variable show that the Central teachers score somewhat higher in all categories but not at a statistically significant level. Apparently little differences between schools can be noted.

INSERT TABLE 12 ABOUT HERE

The questionnaire, in addition to providing the researchers with data for the factor clusters previously described, also provided teachers the opportunity to respond directly to some questions concerning components of the applied research generalizations from the staff development research. Mean scores for the factor clusters and for five specific program components are found on Table 13. Mean scores by the participants in the two year program are higher in every category than non-participants. One area of noticable difference concerns the use of consultants external to the district. Staff development research would indicate that successful programs would make infrequent use of external consultants. The majority of inservice teaching would come from teachers and others in the district. Participants in the Sidney schools apparently see consultants used "often" as an asset to a staff development program. Several reasons for this phenomenon seem plausible. First, the nature of the materials to be learned and the expertise of the consultants may have a bearing on program success. Second, the frequency of a consultants visits to the district may affect their acceptance by the teachers. Infrequent use of a consultant, but over a longer period of time (such as two years), may be an effective procedure for staff development programs to consider. Third, the "halo" effect of being part of a project with external persons "paying attention" to the schools and teachers could cause a more positive attitude toward this practice. Finally, the personality and demeanor of the consultant could have an affect on this practice. A consultant who projects a "know-it-all" attitude and bearing may not be welcome very often in many

districts. Others who project a positive and "caring" attitude might be very acceptable throughout life of a long term project. Results from this study raise some question with the generalization from staff development research concerning the use of consultants as part of an inservice program.

A second area of major importance concerns the involvement of the teachers in long range and program planning. It seems that the participants in the Sidney program felt that they should be involved fairly often in these short and long range inservice planning sessions, more so than the non-participants. This result supports the generalization from staff development research which indicates the importance of teachers in both short and long range planning for their own inservice programs.

INSERT TABLE 13 ABOUT HERE

Conclusions and Discussion

Based on the quantitative data collected throughout the two year period of the Sidney staff development project, little evidence was found to support the continued use of all of the generalizations derived from the prior research on successful staff development programs. Analysis of the qualitative data, however, when used along with the quantitative information, indicate that some of the research generalizations have some merit for inclusion in inservice programming. Additionally, as in most research efforts, several questions were raised that will require further study.

A cautionary note is also needed at this point to remind the reader that the results contained in this report are from a single district. The district is located in a sparsely populated area of a midwestern state and conclusions should be checked with other similar types of schools. No comparison should be made, nor is intended, with large urban and suburban types of schools.

Seven generalizations from the research on staff development were presented earlier in this paper. Each will now be examined along with the results from this study. Generalizations one and two concern long and short range planning for inservice programs as well as participation by both teachers and administrators in the planning process. Additionally, teachers and their principals should not only plan together, they should participate together.

There seems to be little question as to the importance of teacher involvement in planning staff development programs, both long and short range. Participants in the Sidney schools felt that they should be involved often in this process, and seemed to like the idea of their administrators being involved in both the planning and participating aspects of the programming. Of all of the results found in the Sidney program, this area seemed to have the strongest support, both quantitatively and qualitatively, especially from those teachers who participated in the program. These teachers felt a stronger overall supportive environment was created in the schools and could talk with their principals differently than non-participants.

The third research generalization concerned the content of inservice programs and the relationship of the content to on-the-job utilization and curriculum enhancement. The quantitative evidence to support this generalization was somewhat weak. Participants were stronger in their support for this generalization, but only to a moderate degree. Non-participants were very cool concerning the notion that inservice programs could deliver skills that could be directly applied in classrooms. The qualitative data indicated that teachers could, and at times did, use the new skills developed during the inservice programs, but not in numbers significant enough make a difference. Perhaps teachers were using several of the behaviors prior to the inservice program and simply ennanced or amplified their behaviors accordingly. The data indicate, from the students perspective, that instruction was fairly good to start with. Data from other sources indicate, however, that teachers were using more of the new skills and techniques in their classrooms. Comments from students and parents, as reflected in the logs of some of the teachers and administrators, indicated noticable changes in overt teacher behaviors that were directly traceable to the inservice program. The use of instruments to collect more quantifiable data are indicated by the differences in the type of data collected in this study.

The fourth research generalization stated that staff development programs should be aimed at specific skills, emphasize demonstrations and opportunities for staff to practice the new skills and receive feedback, and be applicable to the classroom. Inservice training sessions included

all of the above recommendations and mandated in-classroom applications of the models of teaching. The breakdown appeared to be in the follow-up and feedback sessions of the program. Teachers reported little time to use the new skills, and when they were used, minimal if any feedback was provided. The lack of opportunities for feedback seemed to be connected with the lack of released time for cadre to visit and work with teachers during school time. If the school structure will not allow intervisitation between teachers, nor allow time for teachers to discuss teaching with one another, then skill-based programs will work for only a few teachers. Time was not provided in Sidney to any great extent and conclusions concerning the generalization cannot be validly made. It would seem that if this generalization was to be accepted, in-school time must be made available to teachers to help one another become more effective.

The statement concerning continuous programming is consistent with the findings about the importance of short and long range planning, although little quantitative data were found to support this notion. Nor was quantitative data found to support the idea that the best inservice programs were found in the local school. Some qualitative results from the Sidney teachers indicated that programs held in their school were more acceptable, but not in any significant way. Indications for in-school program support were notced by bulletin board displays and notices concerning inservice programs in one school.

The sixth generalization concerns the use of local personnel, primarily teachers, to conduct and demonstrate new skills and to observe

other teachers as they learned to use the new materials. A "coaching" relationship should be developed by teachers and administrators when implementing the new skills in their respective buildings. This generalization has been partially covered in a preceeding statement. The "coaching" concept, however, is an important element in the application of new teaching skills in classroom situations. Program participants found the coaching by administrators to be significantly helpful to them when compared to non-participants, but only to a moderate degree. The use of teachers as coaches for other teachers was not seen as effective because the time was not provided for teachers to act in this role. Administrators apparently did not act in this role as much as they might have, although the role was a somewhat new one for them to play. This practice and generalization needs further study before sound conclusions can be drawn.

The final generalization states that staff development programs should be voluntary and provide time for informal peer interactions. The Sidney project did meet this requirement. About one third of the staff participated although all staff members were exposed to the program elements during two mandatory district inservice days. This lack of participation was rather disappointing as it was thought that more teachers, especially at the secondary level, might become involved at one time or another during the two year period. One question that emerges from these behaviors concerns the voluntary-mandatory nature of inservice programs. Should a district that wants certain things to happen for students mandate inservice activities for teachers and meet all other

research generalization requirements? Can mandated programs produce positive results and changes in teacher behavior? How can a district get teachers involved if they will not volunteer to participate in inservice activities? The data from the Sidney teachers, all volunteers, indicate significant differences when compared with non-participating teachers on most areas measured. But this is to be expected from participants who volunteer. Would there be differences from non-volunteer participants? Educators will have to answer these questions about inservice education before final conclusions can be made concerning staff development practices.

The real test of findings from research is their utilization in live settings and under a variety of conditions. This study attempted to try some generalizations concerning staff development in one school district. The procedures used could have been different. In another district they would have been different. Results were mixed and leave one with more questions than answers. Studies similar to this one, conducted in different settings, are needed in order to validate research generalizations that concern practices such as inservice training. This study validated some of the inservice generalizations. Others were not, however, none were rejected.

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TABLE 1
A DEMOGRAPHIC PROFILE OF THE SIDNEY TEACHERS, N=71

Variable		Total N	Total Percent	Non-Participants N	Non-Participants Percent	Participants N	Participants Percent
Age	$\bar{X}$=	40	66.7	40	60.4	39	57.2
Gender Female		43	60.6	23	47.9	20	87.0
Male		28	39.4	25	52.1	3	13.0
Years of Experience	$\bar{X}$=	15.54	62.5	15.29	64.6	16.04	62.5
	SD=	9.54		9.16		10.45	
Years in Current Role	$\bar{X}$=	9.83	65.2	9.67	64.5	10.17	66.7
	SD=	8.29		7.90		9.18	
School		N=73		N=48		N=25	
North Elem.			17.1		8.7		33.3
South Elem.			14.3		13.0		16.7
Central 5-6			15.7		6.5		33.3
Junior High			17.1		23.9		4.2
Senior High			35.7		47.8		12.5
All Elementary			47.1		28.3		83.3
All Secondary			52.8		71.7		16.7

TABLE 2
SIDNEY PERSONNEL MORALE DESCRIPTIONS BASED ON THE PURDUE TEACHER OPINIONAIRE
GROUPS

Moral Cluster	Exp. I N=10 $\bar{X}$	SD	Control N=10 $\bar{X}$	SD	Exp. II N=13 $\bar{X}$	SD	Adminis. N=4 $\bar{X}$	SD
Teacher Rapport with Principal	3.58	0.64	3.27	0.83	3.21	0.18	3.46	0.63
Satisfaction with Teaching	3.61	0.67	3.31	0.86	3.61	0.42	3.69	0.56
Rapport with Teachers	3.54	0.73	3.59	0.52	3.58	0.29	3.41	0.56
Teachers Salary	2.78	1.13	2.46	0.95	2.78	0.21	2.89	0.87
Teacher Load	2.85	1.06	3.22	0.85	3.37	0.36	3.39	0.66
Curriculum Issues	3.30	0.86	3.32	0.70	3.49	0.12	3.60	0.50
Teacher Status	2.65	1.12	2.65	0.81	2.95	0.26	2.56	0.62
Community Support	2.60	1.07	2.95	0.71	2.95	0.32	2.90	0.77
School Facilities and Services	3.18	0.89	2.64	0.89	3.31	0.16	3.50	0.61
Community Pressures	3.26	0.87	3.31	0.82	3.31	0.42	3.35	0.59

Compared with normative data supplied by Purdue, the Sidney professional staff ranks overall at the 65 percentile in terms of the areas measured by the Purdue Teacher Opinionaire.

TABLE 3

K-4 TEACHER EVALUATION BY PUPILS; AN EXPERIMENTAL COMPARISON: THE FIRST GROUP

Teacher Behaviors	Tchrs Trained by Consultants N=7 $\bar{X}$	SD	Control Tchrs N=6 $\bar{X}$	SD	Comparison t
Motivation	2.65	0.26	2.49	0.22	1.60*
Teaching Methods	2.69	0.23	2.58	0.19	2.20*
Procedural/Organizational Skills	2.67	0.22	2.546	0.20	2.17*
Control	2.60	0.20	2.52	0.18	1.33
Communication with Students	2.54	0.26	2.46	0.23	0.86
Fairness	2.52	0.34	2.46	0.20	0.60

*P<.05

TABLE 4

K-4 TEACHER EVALUATION BY PUPILS; A PRE AND POST COMPARISON: THE FIRST GROUP OF TEACHERS TRAINED BY THE EXPERIMENTAL TEACHERS (CADRE)

Teacher Behaviors	Pre-Test N=6 $\bar{X}$	SD	Post-Test N=6 $\bar{X}$	SD	Comparison t
Motivation	2.49	0.22	2.62	0.14	-1.18
Teaching Methods	2.58	0.19	2.65	0.11	-0.88
Procedural/Organizational Skills	2.54	0.20	2.66	0.08	-1.33*
Control	2.52	0.18	2.60	0.14	-0.73
Communication with Students	2.46	0.23	2.54	0.13	-0.73
Fairness	2.46	0.20	2.54	0.08	-0.14

*P<.05

TABLE 5

K-4 TEACHER EVALUATION BY PUPILS; A COMPARISON:
THE FIRST GROUP OF TEACHERS TRAINED BY THE EXPERIMENTAL TEACHERS (CADRE)
WITH A CONTROL GROUP OF TEACHERS

Teachers Behaviors	Trned Tchrs. N=6 $\bar{X}$	SD	Control Tchrs. N=6 $\bar{X}$	SD	Comparison t
Motivation	2.62	0.14	2.70	0.21	-1.60*
Teaching Methods	2.65	0.11	2.67	0.17	-0.63
Procedural/Organizational Skills	2.66	0.08	2.70	0.15	-1.25
Control	2.60	0.14	2.67	0.14	-1.17
Communication with Students	2.54	0.13	2.49	0.29	0.83
Fairness	2.54	0.08	2.51	0.23	0.43

*P<.05

TABLE 6

5-12 TEACHER EVALUATION BY STUDENTS USING THE PURDUE TEACHER EVALUATION BY STUDENTS INSTRUMENT: AN EXPERIMENTAL COMPARISON; TEACHERS TRAINED BY CONSULTANTS (CADRE) WITH A CONTROL GROUP

	Exp. Group N=8		Control Group N=7		Comparison
Teacher Behavior	$\bar{X}$	SD	$\bar{X}$	SD	t
Motivation	3.36	0.26	3.13	0.29	1.64*
Teacher Control	3.36	0.37	3.29	0.34	0.32
Subject Matter Orientation	3.81	0.11	3.81	0.07	0.00
Communications	3.61	0.22	3.40	0.33	1.50*
Teaching Methods	3.53	0.22	3.34	0.27	1.58*
Fairness	3.65	0.21	3.61	0.31	0.31

*P<.05

TABLE 7

5-12 TEACHER EVALUATION BY STUDENTS USING THE PURDUE TEACHER EVALUATION BY STUDENTS INSTRUMENT: AN EXPERIMENTAL COMPARISON; TEACHERS TRAINED BY (CADRE) OTHER TEACHERS WITH A CONTROL GROUP

	Exp. Group 2 N=9		Control Group 2 N=6		Comparison
Teacher Behavior	$\bar{X}$	SD	$\bar{X}$	SD	t
Motivation	3.38	0.39	3.28	0.31	0.23
Teacher Control	3.16	0.50	2.98	0.42	0.64
Subject Matter Orientation	3.72	0.27	3.70	0.25	0.12
Communications	3.63	0.29	3.69	0.27	0.14
Teaching Methods	3.50	0.37	3.61	0.17	-0.61
Fairness	3.53	0.27	3.48	0.42	0.24

*P<.05

TABLE 8

ANOVA: ADMINISTRATORS AS COACHES X SCHOOL X PARTICIPANT GROUP

SCHOOL	GROUP: Non-Participants	GROUP: Participants
	N=13	N=20
Elem.	M=3.75	M=4.38
	N=33	N= 4
Sec.	M=3.57	M=5.56

SOURCE	DF	F	SIG.
Main Eff.	2	8.01	0.01
School	1	0.45	0.51
Group	1	13.77	0.01
Interaction	1	4.80	0.03

TABLE 9

ANOVA: ADMINISTRATORS SUPPORTING STAFF DEVELOPMENT X SCHOOL X PARTICIPANT GROUP

SCHOOL	GROUP: Non-Participants	GROUP: Participants
	N=13	N=20
Elem.	M=3.95	M=4.50
	N=33	N= 4
Sec.	M=3.93	M=5.32

SOURCE	DF	F	SIG.
Main Eff.	2	5.66	0.01
School	1	0.68	0.41
Group	1	10.31	0.01
Interaction	1	2.43	0.12

TABLE 10

ANOVA: TEACHERS TEACHING/HELPING TEACHERS X SCHOOL X GROUP

SCHOOL	GROUP: Non-Participants	GROUP: Participants
	N=13	N=20
Elem.	M=3.14	M=3.34
	N=33	N= 4
Sec.	M=3.02	M=4.45

SOURCE	DF	F	SIG.
Main Eff.	2	2.98	0.06
School	1	0.78	0.38
Group	1	5.78	0.02
Interaction	1	5.52	0.02

TABLE 11

ANOVA: SELF REPORTED TEACHER SKILL GAINS FROM THE STAFF DEVELOPMENT PROGRAM X SCHOOL X GROUP

SCHOOL	GROUP: Non-Participants	GROUP: Participants
	N=13	N=20
Elem.	M=3.69	M=4.21
	N=33	N= 4
Sec.	M=3.84	M=5.39

SOURCE	DF	F	SIG.
Main Eff.	2	5.41	0.01
School	1	3.07	0.08
Group	1	10.83	0.01
Interaction	1	3.44	0.07

TABLE 12

ANOVA: THREE ELEMENTARY SCHOOLS X FIVE PROGRAM VARIABLES

Variables	North N=12	South N=10	Central N=11	DF	F	SIG.
Adm/Coach	M=3.83	M=4.45	M=4.18	2	1.55	0.23
Adm/Supp.	M=4.09	M=4.30	M=4.48	2	0.87	0.43
Tchr/Coach	M=3.17	M-3.12	M=3.50	2	1.03	0.37
Staff Dev. Program	M=3.59	M=4.20	M=5.20	2	11.53	0.01*
Skill Gain	M=3.98	M=3.99	M=4.07	2	0.04	0.96

TABLE 13

FREQUENCIES BY PROGRAM COMPONENTS BY GROUPS

Program Components	Non-Part. N=48 M	SD	Particip. N=25 M	SD	Elem. Tchrs. N=33 M	SD	Sec. Tchrs. N=37 M	SD
Adm/Coach	3.64	1.01	4.59	0.89	4.13	0.83	3.79	1.24
Adm/Support	3.93	0.88	4.62	0.75	4.28	0.70	4.08	1.07
Tchr/Coach	3.06	0.88	3.53	0.77	3.26	0.67	3.17	1.03
Trng. Prog.	3.82	1.11	4.45	1.03	4.31	1.03	3.77	1.18
Skill Gain	3.76	0.98	4.43	0.80	4.01	0.83	4.01	1.02
Prog. Locat.	3.23	1.25	4.08	1.66	3.93	1.46	3.19	1.39
Use of Consultants	3.80	1.15	5.08	1.25	4.78	1.18	3.72	1.23
Prog. Content and Utility	3.70	1.12	4.41	1.47	4.17	1.36	3.76	1.23
Tchr. Help Plan Prog.	4.21	1.35	4.64	1.11	4.63	1.08	4.00	1.37
Long Range Planning	3.98	1.26	4.75	1.39	4.62	1.29	3.94	1.37

TABLE 14

ITEM ANALYSIS
SIDNEY INSERVICE QUESTIONNAIRE

Questionnaire Item	Non-Partic. N=48 M	SD	Participants N=25 M	SD	Totals N=73 M	SD
1. To what extent do peer teaching influence the success of staff development programs in your school district?	3.53	1.18	4.52	1.16	3.87	1.25
2. To what extent does your building administrator help you to develop teaching strategies?	3.42	1.37	4.56	1.47	3.83	1.50
3. To what extent is your building administrator a resource in solving instructional problems in your classroom?	3.62	1.26	4.56	10.4	3.94	1.27
4. To what extent have staff development programs helped you develop skills for communicating more effectively with a student at their level of understanding?	3.72	0.97	4.37	1.21	3.94	1.09
5. How often do you use teaching strategies as a planning format when planning for instruction?	4.24	1.32	4.00	1.29	4.16	1.30
6. How often do you receive help from other teachers in actual classroom teaching?	2.67	1.29	3.24	1.36	2.86	1.34
7. To what extent do you work cooperatively with other teachers on improving classroom instruction?	3.85	1.20	4.12	0.97	3.94	1.12
8. To what extent does your building administrator require you to use teaching strategies?	2.93	1.37	3.40	1.36	3.10	1.37
9. To what extent does the utility of program content influence the success of the Sidney staff development programs?	3.70	1.12	4.41	1.47	3.94	1.28

10.	To what extent does the location of staff development activities influence the success of the program?	3.21	1.25	4.08	1.66	3.51	1.45
11.	To what extent does your building administrator encourage your participation in staff development activities?	4.72	1.19	5.32	1.21	4.93	1.23
12.	To what extent can you effectively manage the problems that may occur in your classes?	5.62	0.89	5.84	0.99	5.70	0.92
13.	To what extent do you integrate teaching models in your teaching strategies/plans?	3.82	1.30	4.32	1.18	4.00	1.27
14.	To what extent does your building administrator show interest in your classroom instruction?	4.81	1.28	5.72	1.06	5.12	1.28
15.	To what extent does the participation of Sidney teachers and administrators as part of the staff development program influence the success of the program?	4.36	1.31	4.92	1.11	4.56	1.27
16.	To what extent does immediate feedback on the use of new teaching skills help you acquire new teaching models?	3.61	1.42	4.68	1.25	4.00	1.44
17.	How often do you help other teachers plan class activities?	2.81	1.45	2.88	1.13	2.84	1.34
18.	To what extent does the support your building administrator influence the success of the staff development program?	4.51	1.32	5.08	1.19	4.71	1.29
19.	To what extent can you effectively develop and implement teaching strategies as a consequence of your participation in staff development programs?	3.70	1.17	4.64	1.19	4.04	1.25

20.	To what extent do demonstrations presented by trainers influence the quality of staff development programs in your school district?	3.80	1.15	5.08	1.26	4.25	1.33
21.	To what extent does your building administrator support you in classroom management areas?	4.83	1.36	5.48	1.36	5.06	1.38
22.	To what extent does the involvement of participants in planning program activities influence the success of staff development programs in Sidney?	4.21	1.35	4.64	1.11	4.36	1.28
23.	To what extent does the individualization of program activities influence the success of staff development programs in Sidney?	3.96	1.28	4.37	1.31	4.10	1.30
24.	My building administrator allows me free time to work on instructional skills with other teachers.	2.63	1.32	2.76	1.39	2.68	1.34
25.	To what extent does long-range planning influence the success of staff development programs in Sidney?	3.98	1.26	4.75	1.39	4.24	1.35
26.	How often do you discuss teaching activities with other teachers?	4.27	1.16	5.20	1.22	4.59	1.26
27.	To what extent does the participation of your building administrator influence the success of the staff development program?	4.36	1.26	5.08	1.29	4.61	1.31
28.	As a result of past and current inservice activities, to what extent can you identify and relate to individual differences among the students in your classes?	4.40	1.27	4.60	1.04	4.47	1.19
29.	How often do you encourage other teachers to become involved in professional growth activities?	3.27	1.22	3.72	1.43	3.42	1.30
30.	As a result of inservice programs, to what extent can you now organize content and processes to meet students' individual needs and class needs as well?	4.11	1.16	4.56	1.08	4.26	1.15

31.	To what extent is your building administrator knowledgeable about the teaching methods you use with your students?	4.20	1.26	5.32	1.11	4.59	1.32
32.	How often do you work with and help other teachers in actual classroom teaching?	2.60	1.65	2.52	1.39	2.57	1.55
33.	How often do you work cooperatively with the building administrator in planning for instruction?	3.13	1.26	3.40	1.32	3.22	1.28

ADDENDUM I

The Sidney Inservice Project

Notes from the Superintendents Log

Getting Started

The most important element, in order to get the program started, was to get a commitment to such a project from the building principals. Their involvement had to include participation in the training program and they had to become part of the teaching "cadre." As the initial cadre members, the principals had to select teachers from their buildings as "cadre." The criteria for selection of the teaching cadre were determined to be: 1) evidence of leadership, 2) ability to garner support from peers, and 3) evidence of a desire to improve and make changes. The principals then selected members of their staffs who met the criteria and encouraged them to participate in the program.

To provide added incentive, the cadre, including the principals, were given payment of the tuition for the credit hours from the university and the credit hours were made applicable for movement on the salary schedule. Following the semester of training for the cadre, other teachers were given fifty dollars to apply to the tuition costs and the credits they chose to take were also applicable for movement on the salary schedule.

Prior research concerning successful inservice programs included the important element of the necessary support and enthusiasm of the building principal and central administration. A major goal was to have all administrators support and develop an administrative team. The expectation for principals was partially developed by my participation in the program. I, too, became very visible, an active participant and supporter of the

program and the teachers in the program. I observed what teachers were doing in the classroom, discussed the teaching models being used, demonstrated models to teachers and others, and used the vocabulary that we were learning together. Additionally, I would question the teachers and principals in an evaluative manner, i.e., how was teaching different? What were the students reactions and responses to different teacher behaviors? How did the teachers feel about what they were doing? What worked well in their classrooms? And what were they doing differently as a result of the inservice program?

Some Conclusions and Perceptions

There was a notable difference in the continuation and development of the models dependent upon the level of enthusiasm of the cadre and the role of the principal in each building.

The end result to students was most evident. Students frequently discussed with me the difference in teaching styles of those using or not using the teaching models. Students appeared to enjoy the variety in instruction, felt more involved and definitely felt that their teachers were better prepared. When students had other teachers (untrained) they complained of lack of involvement and felt that sometimes the teachers were not well prepared.

I found parents frequently discussing the type of instruction the students were receiving and men making comparisons between teachers. Most of the comments seemed to be generated from the excitement of their children. Parents frequently told me how often their child was telling

them about what happened at school and what they had learned. I was told that the child likes school and wants to go to school whereas before teachers behaviors had changed, many students hated school. This type of response has been most evident in the one building where all teachers and the principal were involved and continue to plan and use the teaching models and skills on a daily basis. (Central School)

I have evidence of better planning on the part of teachers. Student outcomes, the specific student activity, and the specific teaching activity are defined and planned with purpose. This type of planning is rapidly becoming the minimum expected standard for the district.

The teachers involved in the program, both cadre and teachers trained by the cadre, exhibit an improved attitude and open-mindedness about trying new things. They are more receptive to suggestions and ideas. They are assuming the responsibility of leading and directing other staff members in staff development activities.

I now find a cooperative spirit and shared sense of responsibility between the teachers and principals. The working relationship has improved. Teachers no longer feel threatened by the presence of an administrator, and seem to have a greater confidence in their teaching. For instance, two years ago we had a teacher who was uncertain and needed constant reinforcement. Today that teacher is most confident, vibrant and is a teacher leader. The staff development program has certainly resulted in the improvement of instruction in the Sidney schools.

ADDENDUM II

The Sidney Inservice Project

Notes from a Teacher-Participant and Cadre Member

At the beginning of the Staff Development project, many teachers were skeptical that any college class could change them or their teaching methods. Most chose not to take the course offered even though costs would be paid by the school district and/or the local service unit. These teachers, of course, did not change their methods or attitudes. Some who elected to take the class refined methods of teaching they had used in the past, and added new ideas on instruction to their repertoire.

Soon after the class began, teachers attitudes changed also. Most of the cadre realized that the professors (consultants) instructing the Models of Teaching class were genuinely interested in better education and were willing to show, not just tell, teachers new and better ways of planning and teaching. Members of the cadre also began to see that they could help and encourage one another, and especially gain from each other's strengths. Classrooms at school buzzed with activity as teachers and administrators worked with students trying to perfect the models of teaching they had learned on weekends. Many students had not seen much of administrators in classroom before. Several teachers had to assure their elementary children that they (the teacher) were not being fired. Both administrators and teachers struggled with the Models Class and began to rely on one another for ideas and support. This was a definite change in attitude and the two groups began to develop more respect, understanding and rapport with one another. These teachers, administrators, and consultants, in effect,

became "family," helping each other and relying on each other for help--trying to achieve an even better quality of education in Sidney.

This cycle repeated itself as the second session began the spring semester of 1982. The difference was that certain members of the cadre began to teach the Models Class to other teachers in their buildings. This time the skepticism centered around the question: "How could teachers help teach a college class after only one semester of instruction?" After some initial distrust, the teachers began working together in much the same way the cadre had the previous semester.

The teachers at Central School (the 5th-6th grade center) had a closely knit family, but even more enthusiasm and trust developed as the class continued. Teachers observed other teachers, aided each other in planning strategies of teaching, and helped run video equipment. More than occasionally teachers were sounding boards for ideas and sometimes shoulders to cry on when nothing had worked or when something had and then someone had taped over that good lesson. These teachers within the building now became "family."

Many changes occurred over the two years of this project. Though the statistical data does not indicate it, many in the school felt that student achievement did improve and that students began to "think" as well as learn facts. Several teachers were sure standardized test scores improved as a result of the models approach to teaching. Instructors no longer feared visits from other teachers or administrators, and because of entensive use of video equipment, students and teachers relished watching themselves as

television stars. More and more self evaluation took place as teachers watched themselves on tape.

It was obvious this inservice project helped many teachers gain new approaches to teaching and helped them acquire confidence to challenge students through new teaching processes. This project resulted in a more cohesive faculty and established a better rapport among teachers and administration. When teachers attitudes, goals, strategies, and teaching methods changed, the result was enthusiasm among staff and students which, in turn, resulted in improved achievement by students.

Teachers teaching other teachers was a new practice in Sidney. This practice did not happen before the inservice project. Now there are teachers throughout the system who have given inservices on special education and discipline to individuals and faculties. Teachers now help teach others computer education concepts and skills, and many others listen to one another's plans and suggest methods and models others might use in daily classroom teaching.

The most cognitive results of this project showed up in attitude changes, but many more subtle changes are beginning to occur. It will be interesting to look back in a few years and discover what changes can be traced to the staff development project begun in 1981.